EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert A. Voigt on 9/23/08, and 1/5/09.

The application has been amended as follows:

IN THE CLAIMS

Please cancel claims 21 and 25-28 without prejudice or disclaimer.

Please amend claims 1 and 11 as indicated below.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended) An *in situ* desalination apparatus adapted for use located in a borehole containing groundwater from a subterranean aquifer and provided with a casing for the borehole, the casing comprising a wall at least a portion of which is screened allowing water to flow therethrough, the desalination apparatus comprising:

a sealing means for sealing against the borehole casing to separate the borehole into upper and lower portions the casing allowing flow of ground water through the screen into at least the upper portion;

a reverse osmosis unit comprising a reverse osmosis medium;

an inlet for the reverse osmosis unit located on one side of the reverse osmosis medium, in use the inlet to be located below the upper surface of the groundwater and in the upper portion of the borehole with respect to the sealing means;

a concentrate outlet for the reverse osmosis unit opening to the ~~same~~ one side of said reverse osmosis medium as the inlet, for delivering concentrate to the lower portion of the borehole with respect to the sealing means;

a permeate outlet on the other side of the reverse osmosis medium from said inlet;

a delivery line in fluid communication with the permeate outlet in use extending from the body of water; and

a pump for delivering groundwater to the inlet; and wherein the sealing means is adapted to allow the apparatus including the sealing means to be removably inserted into the borehole casing, wherein the sealing means is a packer adapted to allow the apparatus to be removably inserted into the borehole casing.

Claim 2 (cancelled)

Claim 3 (previously presented) An *in situ* desalination apparatus according to claim [2] 1 wherein the sealing means is expandable from a state receivable within the casing to an expanded state sealed against the casing.

Claim 4 (previously presented) An *in situ* desalination apparatus according to claim 3 wherein the sealing means comprises an inflatable packer which can be selectively inflated to seal against the casing.

Claim 5 (cancelled)

Claim 6 (previously presented) An *in situ* desalination apparatus according to claim [5] 1 wherein the sealing means seals against the casing to separate the borehole into an upper part wherein the casing comprises a screened wall portion for admitting water from the aquifer and a lower part wherein the casing comprises a screened wall portion to allow the saline concentrate to dissipate within the aquifer.

Claim 7 (previously presented) An *in situ* desalination apparatus according to claim 6 wherein the casing comprises two screened portions axially spaced along the length of the casing.

Claim 8 (previously presented) An *in situ* desalination apparatus according to claim 1 wherein the permeate outlet is associated with a pumping means adapted to extract permeate passing through the reverse osmosis medium.

Claim 9 (previously presented) An *in situ* desalination apparatus according to claim 1 wherein the permeate outlet is vented to the atmosphere.

Claim 10 (previously presented) An *in situ* desalination apparatus according to claim 1 wherein the pump is a common pump connected to the inlet and the permeate outlet through a set of valves whereby said common pump is able to introduce said water into the inlet and deliver permeate from the permeate outlet through a controlled activation of the valves.

Claim 11 (currently amended) An *in situ* desalination apparatus comprising

a length of tubular borehole casing adapted in use to be located in a borehole the casing comprising at least a portion of screened wall for allowing the passage of water through the casing;

a sealing means for sealing against the borehole casing and dividing the borehole within the casing into an upper portion and a lower portion, the sealing means and borehole casing cooperating to allow flow of ground water through a screened portion into at least the upper portion;

a reverse osmosis unit supported within the bore hole by the sealing means the reverse osmosis unit having a reverse osmosis medium;

an inlet for the reverse osmosis unit providing communication between the upper portion of the interior of the casing and one side of the reverse osmosis medium;

a concentrate outlet for the reverse osmosis unit providing communication between the one side of the reverse osmosis medium and the lower portion of the

borehole, wherein the concentrate outlet is controlled by an exhaust valve which is closed upon the pressure at the one side of the reverse osmosis medium falling below a pressure of determined magnitude which is at least equal to the desired operating pressure of the reverse osmosis unit;

a permeate outlet for the reverse osmosis unit opening on the other side of the reverse osmosis medium;

a delivery line in communication with the permeate outlet extending from the body of water; and

a pump for delivering water under pressure from the upper portion of the interior of the casing to the inlet, whereby the pressure differential created across the reverse osmosis medium facilitates reverse osmosis and wherein the tubular borehole casing includes a portion of screened wall in the upper portion of the casing with respect to the sealing means and a screened portion in the lower part with respect to the sealing means, wherein the sealing means is a packer adapted to allow the apparatus to be removably inserted into the borehole casing.

Claim 12 (cancelled)

Claim 13 (original) An *in situ* desalination apparatus according to claim 11 wherein the screened wall is continuous.

Claim 14 (original) An *in situ* desalination apparatus according to claim 11 wherein there are at least two portions of screened wall at axially spaced locations along the length of the casing.

Claim 15 (original) An *in situ* desalination apparatus according to claim 11 further comprising a groundwater delivery pump for providing a flow of groundwater through a screened portion into an upper portion of the borehole in the casing.

Claim 16 (previously presented) An *in situ* desalination apparatus according to claim 11 wherein the sealing means is expandable from a state receivable within the casing to an expanded state sealed against of the casing.

Claim 17 (original) An *in situ* desalination apparatus as claimed at claim 11 wherein the permeate outlet is associated with a pumping means adapted to extract permeate passing through the reverse osmosis medium.

Claim 18 (original) An *in situ* desalination apparatus as claimed at claim 17 wherein the permeate outlet is vented to the atmosphere.

Claim 19 (previously presented) An *in situ* desalination apparatus according to claim 11 wherein the concentrate outlet is controlled to maintain pressure of predetermined magnitude sufficient for reverse osmosis.

Claim 20 (previously presented) An *in situ* desalination apparatus according to claim 11 wherein the sealing means comprises an inflatable packer which can be selectively inflated to provide the sealing against the casing.

Claim 21 (cancelled)

Claim 22 (previously presented) An *in situ* desalination apparatus according to claim 11 wherein the reverse osmosis medium, pump and sealing means together comprise a unit which is removable from the casing.

Claim 23 (previously presented) An *in situ* desalination apparatus according to claim 11 wherein the casing comprises two screened portions at axially spaced locations along the length of the casing and the sealing means in use engages the inner face of the casing between the two screened portions such that the upper portion communicates with the upper most screen and is sealed from the lower screen.

Claim 24 (original) An *in situ* desalination apparatus according to claim 11 comprising a borehole in an aquifer comprising a water table, a borehole casing lining the borehole, an assembly comprising the reverse osmosis unit, the pump and the sealing means adapted to be removably inserted in the borehole casing and retained therein by radial expansion of the sealing means.

Claims 25-28 (cancelled).

Reasons for allowance

2. The following is an examiner's statement of reasons for allowance: claims 1, 3-4, 6-11, 13-20, 22-24 are allowed over the prior art o record. In the desalination apparatus of WO 03/102,346, the sealing member is not removable from the downhole (borehole) with the desalination membrane device. Using a removable packer in the reverse osmosis membrane system as in present claims as whole is not suggested in the WO document. The amendment above was provided by Mr. Voigt as response to the rejection of 12/11/08, which amendment was proposed by the Examiner in a previous interview, as indicated in the final office action.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M. Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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